

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A pump, comprising:
a compression surface;
a hollow compression tube secured to the compression surface;
compression means for incrementally compressing the compression tube against the compression surface to create a moving occlusion of the compression tube that uniformly pushes fluid through the compression tube, wherein the compression means has at least one rest position in which the compression means does not compress the compression tube in a manner such that the compression tube is free of any occlusions; and
wherein:
a channel is formed in the compression surface,
the hollow compression tube includes a flange extending along a length thereof
that is engaged with the channel for securing the compression tube to the compression surface, and
the flange is cylindrically shaped and integrally formed with the compression tube.
2. (Original) The pump of claim 1, wherein the compression means is a single roller that rolls along the compression tube.
3. (Original) The pump of claim 2, wherein:
the compression surface is annularly shaped; and
the single roller rotates about a fixed point.

4. (Withdrawn and Currently Amended) The pump of claim ~~1~~ 2, wherein:
the compression surface is elliptically shaped; and
the single roller is mounted to a spring loaded arm that rotates about a fixed point.
5. (Withdrawn) The pump of claim 4, wherein as the spring loaded arm rotates through a complete revolution about the fixed point, the single roller disengages from the compression tube at least twice.
6. (Withdrawn) The pump of claim 1, wherein:
the compression means is a plurality of rollers that roll along the compression tube; and
no more than one of the plurality of rollers compresses the compression tube at any given time.
- Claims 7-8: Cancelled.
9. (Original) The pump of claim 1, further comprising:
a pump housing that defines a cavity, wherein the compression means is disposed in the cavity; and
a cassette assembly removably disposed in the cavity, wherein the cassette assembly includes the compression surface and the hollow compression tube.
10. (Original) The pump of claim 1, wherein the compression means includes a second rest position in which the compression means forms a temporary pinch-valve by temporarily stalling the moving occlusion of the compression tube.

11. (Currently Amended) A pump, comprising:

a pump assembly that includes:

a pump housing that defines a cavity,

a roller disposed in the cavity, and

a motor for moving the roller relative to the housing;

a cassette assembly removably disposed in the cavity and including:

a cassette housing having a compression surface, and

a hollow compression tube secured to the compression surface;

wherein as the motor moves the roller, the roller presses the compression tube against the compression surface to create a moving occlusion of the compression tube for pushing fluid through the compression tube, and wherein the roller has a rest position where the roller does not contact the compression tube and the compression tube is free of any occlusions;

wherein:

a channel is formed in the compression surface,

the hollow compression tube includes a flange extending along a length thereof that is removably engaged with the channel for securing the compression tube to the compression surface, and

the flange is cylindrically shaped and integrally formed with the compression tube.

12. (Original) The pump of claim 11, further comprising:

an arm disposed in the cavity and including a proximal end and a distal end, wherein the roller is attached to the distal end of the arm and the motor is attached to the proximal end of the arm.

13. (Original) The pump of claim 12, wherein the arm is spring loaded for applying pressure on the compression tube by the roller.

14. (Original) The pump of claim 12, wherein the arm has a rest rotational position where the roller does not contact the compression tube.

Claims 15-16: Cancelled.

17. (Currently Amended) A [The] pump [of claim 11,] comprising:
a pump assembly that includes:
a pump housing that defines a cavity,
a roller disposed in the cavity, and
a motor for moving the roller relative to the housing;
a cassette assembly removably disposed in the cavity and including:
a cassette housing having a compression surface, and
a hollow compression tube secured to the compression surface;
wherein as the motor moves the roller, the roller presses the compression tube against the
compression surface to create a moving occlusion of the compression tube for pushing fluid
through the compression tube;
wherein the pump housing includes:
a lower pump housing portion;
an upper pump housing portion removably attached to the lower pump housing portion.

18. (Original) The pump of claim 17, wherein the upper pump housing portion is hingedly attached to the lower pump housing portion.

19. (Original) The pump of claim 17, further comprising:
a sensor for sensing that the upper pump housing portion is positioned in a closed position relative to the lower pump housing portion.

20. (Original) The pump of claim 11, further comprising:
a sensor for sensing that the cassette assembly is disposed in the cavity.

21. (Currently Amended) A [The] pump [of claim 15,] comprising:
a pump assembly that includes:
a pump housing that defines a cavity,
a roller disposed in the cavity, and
a motor for moving the roller relative to the housing;
a cassette assembly removably disposed in the cavity and including:
a cassette housing having a compression surface, and
a hollow compression tube secured to the compression surface;
wherein as the motor moves the roller, the roller presses the compression tube against the
compression surface to create a moving occlusion of the compression tube for pushing fluid
through the compression tube;
wherein a channel is formed in the compression surface, the hollow compression tube
includes a flange extending along a length thereof, and the flange is removably engaged with the
channel for securing the compression tube to the compression surface;
wherein the cassette housing includes:
a lower cassette housing portion;
an upper cassette housing portion removably attached to the lower cassette housing portion.

22. (Original) The pump of claim 21, wherein:
the lower cassette housing portion includes an annular sidewall and a shoulder extending from the annular sidewall;
the upper cassette housing portion includes an annular sidewall; and
the annular sidewalls of the lower and upper cassette housing portions mate together to form the compression surface, where upper cassette housing portion sidewall is positioned a fixed distance away from the shoulder to define the channel.

23. (Original) The pump of claim 21, wherein:
one of the lower and upper cassette housing portions includes tabs for engaging the other of the lower and upper cassette housing portions.

24. (Original) The pump of claim 14, wherein the arm has a second rest rotational position where the roller forms a temporary pinch-valve by temporarily stalling the moving occlusion of the compression tube.